Determinants of Mutual Fund Performance in Nepal

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Abstract

This research investigates the key determinants influencing the performance of mutual funds in the context of the Nepalese financial market. Employing a descriptive and analytical methodology, the study examines the impact of three predictor variables, namely Net Asset Value (NAV), Expense Ratio (ER), and Portfolio Turnover Rate (PTR), on the dependent variable, Holding Period Returns (HPR). Statistical tools such as correlation and regression analyses are applied to scrutinize the relationships among these variables. The model summary analysis reveals that 53.90% of the variations in HPR are accounted for by NAV, ER, and PTR, as indicated by the correlation coefficient (R-Square). This implies that 46.10% of the variations in mutual fund returns remain unexplained by the included predictor variables, suggesting potential influences from external factors. The regression analysis further demonstrates the significance of the model, with a statistically significant F-statistic (F = 1.98, p = .001). The regression coefficients indicate that NAV positively influences HPR (Beta = 1.776, p = 0.044), while ER and PTR exhibit negative and positive effects, respectively, though ER's impact is statistically insignificant. The study contributes to the understanding of the intricate dynamics affecting mutual fund performance in the Nepalese market. The findings suggest that investors and fund managers should pay particular attention to NAV and PTR as potential drivers of fund returns. The research provides valuable insights for policymakers and market participants seeking to enhance the efficiency and transparency of the mutual fund industry in Nepal.

Keyword*: NAV, ER, PTR, HPR, Financial Performance*

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Introduction

The primary objective of a mutual fund is to mitigate risk for smaller investors who lack the resources to diversify independently. Mutual funds offer professional management, diversification, simplicity, flexibility, and controlled liquidity, providing five significant advantages (Wyss, 2001). Financial institutions, such as mutual fund businesses, play key roles in generating public savings and providing investment capital (Rani & Hooda, 2017). In Nepal, the history of mutual funds dates back to 1993, with the introduction of the NCM Mutual Fund 2050 by Nepal Industrial Development Corporation (NIDC) Capital Market (Rakhal, 2017). Despite this historical foundation, Nepalese mutual funds have faced challenges in outperforming benchmark indicators (Bajracharya & Rauniyar, 2016).

Investors in mutual funds expect a high time value of money commensurate with the risks involved. Regulatory institutions and management gauge mutual fund performance based on metrics such as net asset value (NAV), reward-to-volatility, reward-to-variability, selectivity, market timing, portfolio diversification, and month-end NAV (Upadhyaya & Chhetri, 2019). A mutual fund acts as a collective investment firm utilizing funds from shareholders to acquire financial assets, offering a lower risk level than individual investors can achieve (Kolosov & Soltanmammedov, 2011). Small investors benefit from mutual funds by increasing revenue and reducing exposure to unsystematic risks (Gohar, Ahmed & Asamoah, 2011). For those seeking portfolio diversification with professional management, mutual funds are a viable option. Shareholders in mutual funds gain potential profits through dividends and price appreciation, with the possibility of capital gains or losses upon selling shares

(Boahene, 2015).

The inception of mutual funds in Nepal can be traced back to NCM Mutual Fund 1993, an open-end fund with a par value of NRs. 10 per unit. However, excessive selling pressure led to its conversion into a closed-end fund listed on the NEPSE, with subsequent injection of funds by Nepal Rastra Bank (NRB) and Nepal Industrial Development Corporation (NIDC) in 1995. The fund was terminated in fiscal year 2000/2001. In 1995, the Citizen Unit Scheme was introduced as the only open-end mutual fund in Nepal, managed by Citizen Investment Trust (CIT). While not tradable on the NEPSE, it remains popular among government employees and defensive investors, providing a regular dividend at an 8% interest rate and buyback facilities for unit liquidity. The termination of NCM 1993 provided investors with the option to receive a refund or participate in the new NCM Mutual Fund 2003, demonstrating the dynamic nature of the mutual fund landscape in Nepal. This research delves into the performance and determinants of mutual funds in Nepal, analyzing factors influencing their success and impact on investor outcomes.

Parties involved as per Mutual Fund Regulations Nepal, 2067 (2010 A.D) In Nepal, four parties involved as Fund Sponsor, Fund Manager, Fund Supervisor and Depository. Fund Sponsor establishes and promotes mutual fund. Fund manager is any company or corporate body licensed pursuant who are responsible for registration, operation and supervision of the mutual fund. Fund Supervisor means the group of people appointed for supervising the Mutual Fund. Before the operation of any mutual fund, the fund sponsor shall appoint at least five people from different field and having qualification as per the MF regulation 2010 as the fund supervisors. The fund manager with consent of the fund supervisor should appoint the Depository who are licensed by SEBON for performing task of depository of the fund.

Review of Litrature

Shrider (2009) studied for an investigation into the repercussions of poor stock market performance on mutual fund flows, employing proprietary data to assess how previous performance impacts the drivers of mutual fund flows, particularly among load fund participants. Findings from this study underscored the pivotal role of relative and risk-adjusted performance as major predictors of redemptions during periods marked by record flows into mutual funds. Nazir and Nawaz (2010) contributed a pioneering study that delved into the determinants of mutual fund growth in Pakistan. Recognizing the crucial role mutual funds play in allocating resources in developing countries like Pakistan, their research provided valuable insights into the influence of various factors on mutual fund growth. The study employed panel data from 2005 to 2009 and examined 13 family equity mutual funds, shedding light on the unique dynamics at play in the Pakistani mutual fund industry. Csaszar (2012) studied which utilized mutual funds as a case study to create and test a model assessing how organizational structure impacts performance. The study revealed that the decision-making framework within organizations significantly affects the number of initiatives taken and errors made. Siyad (2013) directed attention towards the financial performance of mutual funds, emphasizing their role as an option for individuals lacking financial expertise. This study highlighted the ease with which investors can purchase units from fund management and the potential benefits for those seeking reduced time and resource investment in selecting optimal securities. The global perspective on actively managed equity mutual funds was examined by Ferreira et al. (2013), with a particular focus on disparities between the United States and the rest of the world. Their findings illuminated the existence of negative scale effects in the United States, attributed to liquidity restrictions faced by funds investing in small and local stocks. Cuthbertson, Nitzsche and O'Sullivan (2016) conducted a comprehensive literature review, critically evaluating the influence of management effects and fund features on mutual fund performance. This review emphasized the challenges associated with predicting future returns and the common presence of manager behavioral biases that tend to diminish returns. Singh (2016) studied in on the Indian context, exploring the determinants of mutual fund product performance. The study identified specific drivers, including fund family size, fund size, fund age, management experience, and management tenure, with a significant impact on the returns of mutual fund products in India. Ayaluru (2016) explained the performance analysis of selected Reliance Mutual Fund schemes in India provided a nuanced assessment, offering insights into risk and return profiles.

Bajracharya and Rauniyar's (2016) explained the importance of Nepalese mutual funds considering various factors such as lag return, liquidity, and assets, in assessing mutual fund performance. Kaur and Kaushik (2016) investigated that the investment behavior of investors towards mutual funds in India highlighted the need to understand the factors influencing investors' decisions. Pangestuti, Wahyudi and Robiyanto (2017) examined the performance evaluation of equity mutual funds, utilizing various performance metrics to offer a comprehensive assessment in Indonesia. Hassan and Hussin (2018) worked in Malaysia aimed to develop a conceptual framework for evaluating mutual fund performance. The study highlighted historical return, fund governance, timing, and selection abilities as key factors influencing mutual fund performance, with mutual fund fees serving as mediators in determining performance. Asad and Siddiqui (2019) examined the impact of micro and macro fund-specific factors on mutual fund returns, revealing the positive influence of risk and expenditure ratio on returns. Thapa (2019) studied financial performance evaluation of mutual funds in Nepal focused on selected schemes, applying various statistical and financial methods to assess their performance. Arora and Raman (2020) evaluated the performance of equity mutual fund schemes in India, emphasizing the importance of considering various parameters such as fund size, scheme type, returns, and risk. Rakowski (2021) has made the investigation into the regime-switching determinants of mutual fund performance in South Africa unveiled the significance of fund-level and systemic factors, especially during changing market conditions. Gyamfi Gyimah, Addai and Adamoah (2021) explored the macroeconomic variables in Ghana showcased the long-run positive and negative impacts of exchange rate, inflation, T-Bill, GDP growth, and monetary policy rate on mutual fund financial performance. Mahar, Mangnejo and Brohi (2021) provided an overview of existing research on the determinants of mutual fund performance, identifying characteristics such as fund size, turnover, and management effectiveness as key factors. Maharjan (2021) studied the Nepalese closed-end mutual funds highlighted the need to consider various measures, including NAV, expenditure ratio, and turnover, in evaluating their performance. Rahman and Qoyum's (2022) examination of Islamic equity funds' performance in Indonesia emphasized the importance of both internal and external variables in influencing the success of these mutual funds. Haralayya (2022) focused on the evaluation of mutual funds' performance and the benefits of professional management in the financial sector. The study underscored the need for a customer-centric approach to financial management, emphasizing the importance of understanding and meeting clients' needs. Kumari and Debnath (2022) examined the drivers of mutual fund flows in the Indian stock market provided valuable insights into the factors influencing mutual fund investment decisions. Niraula, Ghimire, and Tamang's (2023) study on the net asset value (NAV) and its determinants of mutual funds in Nepal contributed crucial insights into the factors affecting the financial performance of mutual funds.

A mutual fund performance review is critical for individuals who like to invest in mutual funds. This research helps investors make decisions by presenting some thoughts and concepts about mutual funds. Conducting research is a continuous process that involves discovering new things over and over again. From the previous literature review, it can be inferred that there have been numerous studies on the topic of mutual funds. Each of these studies has its importance and limitations. Most of the literature related to this topic has been conducted on foreign economies, with limited research on the Nepalese economy. This research study aims to address the deficiencies found in previous pieces of literature, particularly in the Nepalese context.

Conceptual Framework

The dependent variable of this study is the holding period return, which is a measure of the profitability of the mutual fund investment over a specific period of time. The independent variables of interest are the net assets value, expenses ratio, and portfolio turnover ratio which are all known to impact the performance of the mutual fund.

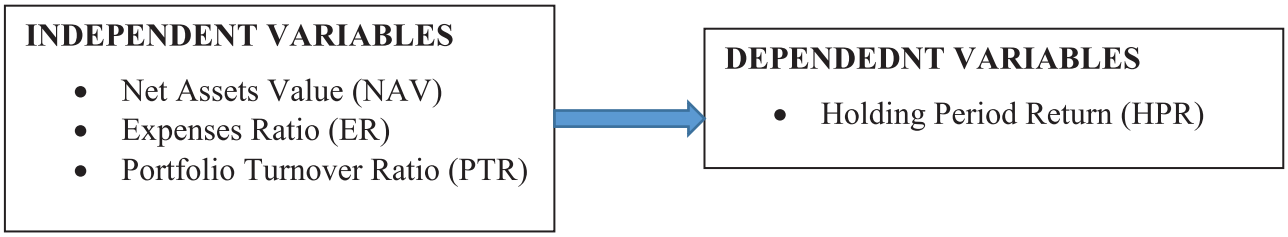

Figure 1 Conceptual Framework

Methodology

This study has conducted descriptive and analytical research designs have been adopted to achieve the stated objectives. A descriptive research design has been utilized to determine the financial performance and identify the factors influencing the financial performance of the mutual funds in Nepal, which is the first and second objective of the study. On the other hand, an analytical research design has been employed to analyze the impact of variables such as net assets value (NAV), portfolio turnover ratio (PTR), and expenses ratio (ER) on the financial return of mutual funds in Nepal. To fulfill the requirements of the descriptive research design, descriptive statistics have been implemented to present the positions of the selected mutual funds. This includes using measures such as mean, minimum, maximum of the data to measures the range and standard deviation to describe the variability of the data. Under the analytical research design, correlation analysis has been conducted to examine the relationship between the determinant factors and financial return and regression analysis has applied to analyze the impact of independent variables into dependent variable. There are currently 28 closed-end mutual funds trading in the NEPSE market. Hence, for this study, Global IME Samunnat Scheme - 1 (GIMES1), Laxmi Equity Fund (LEMF), NIC Asia Growth Fund (NICGF), NMB Hybrid Fund L-1 (NMBHF1), Sanima Equity Fund (SAEF), and Siddartha Equity Fund (SEF) were selected as the sample. These were selected using a convenient sampling method based on the availability of data. This study applied the secondary data collected from their annual balance sheets for the period of 2017 to 2022.

Multiple Regression Model:

$$\hat{Y}HPR = \alpha + \beta 1\ NAV + \beta 2\ ER + \beta 3\ PTR + \varepsilon_t \quad \text{(i)}$$

Where,

$\hat{Y}$= Regression line
α = Regression constant (i.e., point of interception on Y-axis).
$\beta 1, \beta 2, \beta 3$ = Regression Coefficient
HPR = Holding Period return
NAV = Net Assets Value
ER = Expenses Ratio
PTR = Portfolio Turnover Ratio
ε_t = Error term

Result and Discussion

Result Analysis

A descriptive analysis is a process of presenting data in different forms that make it easy to understand and interpret the data. It describes and summarizes the provided data constructively by rearranging, ordering, and manipulating the data to provide insightful information about the provided data. It is used to describe the basic features of the data in this study.

Table 1

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
PTR	14.53	24.88	19.75	5.175
NAV	8.56	17.63	13.09	4.535
ER	0.17	3.17	1.67	1.5
HPR	-14.9	37.94	10.24	26.42

From table 1, it is seen that the mean value of the PTR is 19.75 percent, which lies between minimum of 14.53 percent and a maximum of 24.88 percent. Similarly, the standard deviation of PTR is 5.175 percent. The NAV has a mean value of Rs.13.09, which lies between a minimum of Rs.8.56 and a maximum of Rs.17.63 Similarly, the standard deviation of NAV is Rs.4.535 Similarly, the mean value of ER is 1.67 percent, which lies between a minimum of 0.17 percent and a maximum of 3.17 percent. Similarly, the standard deviation of ER is 1.5percent. Similarly, the mean value of HPR is 10.24 percent, which lies between a minimum of -14.9 percent and a maximum of 37.94 percent. Similarly, the standard deviation of PTR is 26.42 percent.

Table 2

Correlation Analysis

	HPR	NAV	ER	PTR
HPR	1			
NAV	.227	1		
ER	0.035	0.001	1	
PTR	0.038	-0.179	0.178	1

Table 2 shows that all the selected independent variables have a positive correlation with HPR. The correlation between HPR and NAV, ER, and PTR is 0.0.227, 0.035, and 0.038 respectively. There is a positive relationship between HPR and NAV, ER and PTR. It means that NAV, ER, and PTR increase or decrease would be positively related to an increase or decrease in HPR. The relationship of HPR with NAV is statically significant.

Regression Analysis

Table 3

Model Summary Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.734	0.539	0.516	12.74036

Predictors: (Constant), NAV, ER, PTR

The results of the model summary analysis showed that 53.90% of variations in the dependent variable i.e., HPR are explained by variations in the selected predictor variables as depicted by the correlation coefficient (R-Square). This means only 46.10% of variations in the stock returns were elucidated to other variables that were not included in the model.

Table 4

Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	961.88	3	320.63	1.98	.001
	Residual	15582.41	96	162.32		

Model	Sum of Squares	df	Mean Square	F	Sig.
Total	16544.29	99			

a. Dependent Variable: HPR

b. Predictors: (Constant), NAV, ER, PTR

Table 4 present the relationship between HPR and NAV, ER, and PTR. This table shows the significance of NAV, ER, and PTR, influencing the HPR. At a level of confidence of 95%, the P-value is less than 0.05 ($p<0.05$). It found that the relationship between HPR and NAV, ER, and PTR is significant.

Table 5

Regression Coefficient Analysis

Model	Variables	Beta Coefficient	Std. Error	t-Value	Sig.	VIF
1	(Constant)	-2.707	1.29	-2.09	0.034	
	NAV	1.776	0.847	2.097	0.044	1.022
	ER	-0.595	2.193	-0.272	0.788	1.058
	PTR	0.606	0.728	1.983	0.032	1.08

a Dependent Variable: HPR

The main objective of this study is to explore the factors influencing the Holding Period Return (HPR) of mutual funds. The regression equation is specified as follows:

$$HPR=-2.707+1.776\times NAV-0.595\times ER-0.606\times PTR$$

The coefficient of NAV is positive (1.776), indicating that an increase in the Net Asset Value is associated with a corresponding increase of 1.776 units in the Holding Period Return, holding other variables constant. This suggests that higher Net Asset Values tend to be linked with better mutual fund performance in the study. This result is consistency with the study of Babbar and Sehgal (2018), Ramasamy and Pachiyappan (2019).

The coefficient for ER is negative (-0.595), suggesting that an increase in the Expense Ratio is associated with a decrease of 0.595 units in the Holding Period Return, holding other variables constant. This implies that higher expense ratios might have a negative impact on mutual fund performance with the similar result of Droms and Walker (2001), Jiang, Yao and Yu (2007) and Manek (2016). The coefficient for PRT is positive (0.606), indicating that an increase in Portfolio Turnover is associated with an increase of 0.606 units in the Holding Period Return, holding other variables constant. This implies that higher portfolio turnover might have a positive impact on mutual fund performance like the study of Berkowitz, Schorno and Shapiro (2017) and Kaur (2018).

Furthermore, the statistical significance of these coefficients is assessed using the t-values and corresponding p-values. The p-values for NAV (0.044) and PRT (0.032) are less than the conventional significance level of 0.05, suggesting that these variables are statistically significant in explaining the variation in HPR. However, the p-value for ER (0.788) is greater than 0.05, indicating that the Expense Ratio may not be statistically significant in this model.

This study should also consider other diagnostics such as the variance inflation factor (VIF) to assess multicollinearity among independent variables. In this model, all VIF values are less than 5 which indicates that there is no multicollinearity problem is this study.

Conclusion and Implications

Conclusion

The regression analysis on the determinants of mutual fund performance in Nepal reveals valuable insights into the relationships between key variables. The model, with an R Square of 0.539, indicates a moderate level of

explanatory power, suggesting that 53.9% of the variability in Holding Period Return (HPR) can be explained by Net Asset Value (NAV), Expense Ratio (ER), and Portfolio Turnover Rate (PTR). Among the predictor variables, NAV demonstrates a positive and statistically significant association with HPR, implying that a higher Net Asset Value is linked to increase Holding Period Returns. However, ER and PTR do not exhibit significant relationships with HPR.

Implications

Investors are advised to prioritize mutual funds with higher Net Asset Values, as they are positively correlated with greater Holding Period Returns. Consideration of Expense Ratio and Portfolio Turnover ratio may not be as crucial in decision-making, given their lack of significance in predicting HPR. Fund managers should reassess the importance of Expense Ratio and Portfolio Turnover Rate in influencing mutual fund performance in the Nepalese market. Strategies aimed at maximizing Net Asset Value could potentially enhance overall fund performance. While NAV proves to be a significant factor, further research is encouraged to explore additional variables and their potential impact on mutual fund performance in Nepal. Continuous monitoring and analysis are essential to adapt strategies based in the Nepalese financial market.

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